Code # BP-M-24
(for office use only)

NEW JERSEY
BEST PRACTICES
2002-2003 APPLICATION

Failure to comply with the procedures for submission of the application will result in the elimination of the application.

Application Requirements:

1. **RESPONSES to the information and the statements below must be ANONYMOUS and ACCURATE.** No reference should be made to the names of the district, the school(s) or community. Use the words "the school" or "the schools" in responding to the statements
2. **USE ONLY THE SPACE PROVIDED ON THE APPLICATION FORM on pages 1, 2 (if applicable), and 4.** Do not include any additional materials, as they will not be reviewed in the selection process.
3. Applications must be typed on **8 ½" x 11"** white paper, portrait format. Twelve-point or larger computer font or fourteen-pitch or larger typewritten font must be used. This sentence is in twelve-point Times New Roman.
4. Keyboarded responses to all the statements below must be no more than a total of four pages. Keyboard and number the statement followed by the response. Format your response for clarity.
5. **The information on page 4 and the responses** to statements must be copied on one side of the page. The information on pages 1 and **2** (if applicable) must be copied on one side of the page. Staple pages 1, 2 (if applicable), 4, and the keyboarded responses together, in that same order.
6. The original application must be signed by the district chief school administrator or charter school lead person, indicating his/her approval.
7. **The original and seven copies of the application** must be submitted to the county superintendent of schools by **December 15, 2002**, with the **Itemized List of District Applications** form. Keep the seven copies of each application together with the original containing the signature of the district chief school administrator or charter school lead person on the top of each set.

The following data is required to assist the panelists in the evaluation of the application:

Type of School
___ Elementary School
_X_ Middle School
___ Junior High School
___ High School
___ Other: _____

Grade Levels
_____
6
_____
_____
_____

Practice Name Puppets on Parade

Number of Schools with Practice 1
Number of Districts with Practice 1
Location __ Urban/City __ Suburban With Urban Characteristics
__ Suburban __ Small City/Town x Rural

Check the ONE CATEGORY into which the practice best fits.

___ Arts (Visual and Performing Arts)
___ Assessment/Evaluation
___ Citizenship/Character Education
___ Diversity and Equity Programs
___ Early Childhood Education Programs
___ Educational Support Programs
___ Educational Technology
___ Gifted and Talented Programs
___ Guidance and Counseling Programs
___ Health and Physical Education
___ Language Arts Literacy
_X_ Mathematics
___ Professional Development
___ Public Engagement (family involvement and partnerships with business, community, school districts, and/or higher education)
___ Safe Learning Environment
___ School-to-Careers/Workplace Readiness
___ Science
___ Social Studies
___ Special Education
___ World Languages/Bilingual Education

1. Describe the practice proposed for recognition, and list its objectives. Detail how the practice is innovative and how it promotes high student achievement.

2. List the specific *Core Curriculum Content Standards, including the Cross-Content Workplace Readiness Standards,** addressed by the practice and describe how the practice addresses those standard(s). Provide an example to substantiate your response.

3. Describe the educational needs of students that the practice addresses. Document the assessment measures used to determine the extent to which the objectives of the practice have been met. Provide assessments and data to show how the practice met these needs.

4. Describe how you would replicate the practice in another school and/or district.

*The 2002 edition of the ***Core Curriculum Content Standards*** published by the New Jersey State Department of Education was disseminated to all districts and charter schools and is available on line through the department's web site at http://www.state.nj.us/education.

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1. **Describe the practice for recognition, and list its objectives. Detail how the practice is innovative and how it promotes high student achievement.**

"Puppets On Parade" is an interdisciplinary unit of study designed to incorporate math, science, technology, and language arts skills. Students are given the task of designing a puppet that demonstrates at least two types of human body motion. The students must use 3 sets of prime and composite dimensions in designing proportional body parts. The puppet must walk in a realistic manner with a stride length in proportion to its body. Students then present their puppets to the class, explaining the technical design and demonstrating the types of motion that they have built into the puppet. They must also demonstrate that they have used three sets of prime and composite numbers in the design. Upon completion of the design and construction tasks, students are required to appropriately dress their puppet to identify a character of a historic biography or autobiography that they have read as part of a language arts requirement. The students make a second presentation in their language arts class after they have dressed their puppets to reflect the primary characters of the books they have read.

Upon completing this unit students will be able to:

1. Describe human mobility
2. Classify motion (rotary, linear, reciprocating, oscillatory)
3. Identify prime and composite numbers
4. Use investigative methods
5. Write and explain a ratio
6. Identify equivalent ratios
7. Present and explain technical information
8. Bring to life in a presentation a historic character from a biography or autobiography.

This unit provides an innovative approach to teaching essential math concepts including ratio and proportion, prime and composite numbers, and measurement while using investigative techniques and a problem solving approach. It further presents complex concepts regarding the classification of motion, as well as reinforcing reading and speaking skills.

2. **List the specific *Core Curriculum Content Standards, including the Cross-Content Workplace Readiness Standards*, addressed by the practice and describe how the practice addresses those standards. Provide an example to substantiate your response.**

Standard 4.5 (Mathematical Processes) All students will use mathematical processes of problem-solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas.

Standard 5.1 (Scientific Processes) All students will develop problem-solving, decision-making and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results.

While this unit addresses several of the Core Curriculum Content Standards for mathematics, it addresses Standard 4.5 and Standard 5.1 most thoroughly. With the design of their puppets, students are utilizing a problem solving approach. Their figures must not only be proportional but they must be proportional while using a combination of prime and composite numbers in the measurements of the body parts. The puppet creations will reinforce the spatial understanding of the mathematical concepts and the proportional relationships they are demonstrating. Additional application of geometric properties relative to the problem of creating human type motion in the puppet will also be experienced. Students will then explain how they constructed their puppets with the prime and composite numbers they used for their measurements. They will also be required to demonstrate the proportional relationship to a human body in terms of ratio.

Standard 5.4 (Nature and Process of Technology) All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.

Standard 5.7 (Physics) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.

Incorporated in the design of the puppet, the students must demonstrate two of the four classifications of motion (rotary, linear, reciprocating, oscillatory) needed to animate the puppet in a human like manner. This requires sophisticated planning, design, and construction. Most importantly, it requires a good understanding of the types of motion and their application to human mobility.

Standard 3.3 (Speaking) All students will speak in clear, concise, organized language that varies in content and form for different audiences and purposes.

Built into this unit and extending its interdisciplinary connection is a language arts component that brings the mechanical puppets to life as characters from historical biographies and autobiographies. After reading their biography or autobiography, the students dress their puppets to identify the main character of the book. They then make an oral presentation describing their characters, using the puppet as a visual aide.

3. **Describe the educational needs of students that the practice addresses. Document the assessment measures used to determine the extent to which the objectives of the practice have been met. Provide assessments and data to show how the practice met these needs.**

Sixth grade students can be enthusiastic learners when motivated by interesting projects and challenges. They need and enjoy participating in the learning process through active engagement. This unit integrates fundamental concepts of mathematics and science in a project that requires high level thinking skills along with detailed planning and a problem solving approach. Authentic assessment is determined through the final design, the finished product, and the oral presentation of the project that is given by the student. Projects are evaluated by means of rubrics with a range of points from 0 to 5 in each of the following categories: demonstrates human mobility, classifies/demonstrates motion, identifies prime/composite numbers, correctly applies ratio & proportion, and provides a narrative outlining the problem solving steps used in design and construction. Data collection instruments are also evaluated to ensure students adhered to guidelines and requirements. Teachers report that at least 84% of all students achieved a minimum of 20 out of a possible 25 points on their projects which would indicate a very high level of understanding and success by the students.

4. **Describe how you would replicate the practice in another school and or district.**

This practice can be easily replicated in a school that integrates subject area disciplines either among a team of teachers who teach math, science and language arts or in a self-contained classroom environment. In this school it is a team effort with members of the team planning together. Through a team teaching approach students realize the necessity of using more than one academic discipline to find a solution. It further demonstrates the constructivist theory of learning and a variety of approaches that can be used to solve a problem. Important components of a school program that would facilitate replication of this practice include the following:

a. Team planning
b. Student centered approach
c. Hands on learning
d. Constructivist theory
e. Alternative assessment methods
f. Flexible scheduling and integration of subject disciplines.

Materiáls used for the project are basically those found in the students' home. They include dowel, cardboard, eyehooks, string, balsa wood, styrofoam, etc. The project also can involve other family members. In this school utilization of family time is seen as one of the benefits of the practice.